IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES
ISSN PRINT 2319 1775 Online 2320 7876
 Journal UGC CARE Listed (Group-I) Volume 14, Issue 05 Nov 2025

Adaptive Reuse and Conservation of Maratha Vernacular Dwellings: Balancing Tradition and Modern Functionality

Swarali Dasharath Sagare[1], Dr. Tophique Qureshi[2]
[1]Assistant Professor, Yashoda College of Architecture, Satara
[2]Associate Professor, Shri Jagdishprasad Jhabarmal Tibrewala University, Jhunjhunu, Rajasthan, India

Abstract: The project being undertaken explores the adaptive reuse and preservation of Marathi vernacular housing with the objective to meet the functional needs of the urban modernists and traditional architecture. The research took a mixed methodology which included field surveys, case studies as well as interviews of the stakeholders in the five heritage sites in Maharashtra. The findings showed that the dwellings were able to accommodate modern functions successfully with the vernacular identity intact at the time of adaptive reuse principles being applied properly, which translates into 82 percent of the dwellings. The sustainable retrofitting methods that were adopted to achieve this energy efficiency are natural ventilation, lime plaster restoration, and the inclusion of solar roofs by as much as 27%. Moreover, a majority of the people who participated in the community (68 percent) reported a strong support on adaptive reuse, associating it with cultural pride and economic development in the area. The study concludes that Maratha houses with their courtyards, stone pillars and timber structures have huge opportunities of being converted into viable contemporary space without losing its authenticity. It highlights that sensitive design-based interventions, traditional craftsmanship, and participatory conservation are the ones that guarantee the continuation of cultures and environmental sustainability. The results make adaptive reuse an important heritage preservation paradigm within the context of a fast urbanizing environment.

Keywords: Adaptive reuse, Vernacular architecture, Maratha dwellings, Heritage conservation, Sustainable design

I. INTRODUCTION

The Vernacular houses of the India region: The Maharashtra houses, of which Marathi is the vernacular language, depict an important part of the Indian architectural heritage as they reflect the socio-cultural beliefs, climate flexibility and skills of the region [1]. These are the houses, frequently surrounded with a court, tiled roofs, carved wooden details and the use of local materials, with the architectural charm of the traditional wisdom and territoriality. But due to high levels of urbanization, shifting patterns of life and demands of modern housing facilities, much of this traditional homes are being deserted, irreverently remodeled or removed [2]. This increasing lack of connection between the traditional and modern functionality poses a serious problem to architects, conservationists, as well as policy-makers. The solution to this problem is to utilize the adaptive reuse which is a context-sensitive and sustainable approach. Heritage buildings can be both conserved and utilized in other ways to serve the community, e.g. as a cultural centre, homestay, museum or community centre; by simply changing the use of the former Marathi vernacular houses, heritage buildings could be repurposed. This kind of strategy adheres to the beliefs of conservation by usage, in such a way so that the heritage buildings sustain themselves economically and socially [3]. The procedure, though, requires a

fine balance of not compromising the architectural originality of the traditional buildings but adding some modern facilities such as comfort, safety, and usability. This study examines the possibility of using adaptive reuse strategies that would preserve Maratha vernacular buildings without affecting their historical integrity. It analyses architectural typologies, material systems and spatial configurations in order to come up with models which are at parity to the traditional and modern standards of living. The research will set out to draw down guidelines that aid in sustainable preservation and adaptive change by means of a study of available cases and design models. All in all, the research leads to a deeper comprehension of how historical architecture may develop in a responsible manner in the contemporary environment to guarantee the further topicality and importance of the Maratha legacy in the 21st century.

II. RELATED WORKS

The recent research on adaptive reuse and conservation of vernacular homes has focused more on the concept of sustainability, cultural continuity and modern functionality on architectural heritage. Research works in different parts of the world are able to give good frameworks and comparative information that can be applied to conserve Maratha vernacular houses in Maharashtra. Ihab and Doğa [15] suggested one new model of adaptive reuse of Mediterranean earthen houses that will not compromise sustainability and preservation of heritage. They give more weight to context-sensitive materials and interpersonal connections in their work and prove how contemporary solutions in the sphere of design can be adapting to the traditional approaches to construction without making the latter less authentic. Likewise, Indraja and Grazuleviciute-Vileniske [16] studied rural homesteads in Lithuania, showing the significance of tacit sustainability an implicit interconnection between the cultural identity and ecological sustainability and the architectural heritage. This worldview is quite similar to the Maratha situation as family homes are decorated with inatangible cultural practices inscribed in the architectural tile. Climatic and quantitative analysis has also played a central role. Khei et al. [17] presented the fine critique of vernacular residential typologies within the Montesinho Natural Park, Portugal, where bioclimatic strategies with help of which one can develop adaptive reuse are observed in warm-summer climates. Their conclusion sheds some light on the fact that the old design elements, including wall thickness, courtyard location, and natural ventilation, might be managed and utilized with the purpose to become energy-efficient in the modern context. Otherwise, Kong et al. [18] examined the color notion and perception of rural housing, and the scientific data indicates that the visual explorations can be psychologically and culturally significant towards giver and taker satisfaction, a phenomenon that is equally important when restoring Maratha houses with unique color schemes and wooden decorations.

Liu et al. [19] made a new structure of integrating the social network analysis and space syntax to assess the public spaces in the nomadic heritage villages of Xinjiang. Their multi-scale methodology provides means of exploring the social dynamics to architectural adaptation which is beneficial in studying the potential benefits of reaching an analysis of how reinterpreted Maratha homes may be used to benefit the community. Liwen et al. [20] analyzed spatial and temporal distributions of vernacular architecture heritage in river basin of China, proposing the term hereditary corridors and it is similar to the formation of region conservation networks of the Maratha settlements.

ISSN PRINT 2319 1775 Online 2320 7876
 Journal UGC CARE Listed (Group-I) Volume 14, Issue 05 Nov 2025

Ma and Roosli [21] involved the adaptive reinterpretation of the subject of traditional crafts by researching on Chaozhou inlaid porcelain, where they highlighted the aspects of how decorative practices could be modified without losing their cultural relevance. This study is similar to the renewal of the Maratha wooden crafts as a result of adaptive reuse. On the same note, Maria and Sanzaro [22] develop a model of knowledge and assessment on the conservation of abandoned historical centers, making special attention to digital tools and participatory planning, which may be important to the management approaches to rural Maratha heritage clusters. A systematic review of spatial arrangements in historic houses in Maryam et. al. [23] established patterns of social interaction that were placed in the layout of a household. Their analysis is useful in the interpretation of how spatial hierarchies in Maratha Wadas such as courtyards and verandas are indicative of sociocultural values that need to be preserved in their reuse. In addition to this, Mazzetto and Vanini [24] compared the sustainable reuse practices in Saudi Arabia and showed that adaptive reuse can be both economically viable to sustainability metrics and culturally viable. Recently, Miran and Husein [25] elaborated a conceptual framework that evaluates the state of preserving heritage buildings within the context of adaptation preparedness focusing on the proactive maintenance of heritage buildings instead of restoration as a response to stress. Finally, Mouraz et al. [26] have made an extensive survey of the connection between rural building rehabilitation and sustainable development utilizing adaptive reuse as an essential tool in the renewal of the dwindling settlements.

III. METHODS AND MATERIALS

The research methodology on the subject of Adaptive Reuse and Conservation of Maratha Vernacular Dwellings is intended to be imbalanced in terms of traditional and modern functionality, to incorporate both qualitative and descriptive methodologies and analysis. This research paper follows the interpretivist philosophy to learn the cultural and architectural aspects of the Maratha homes and uses the case-based analysis to find practical adaptive reuse solutions. The methodology can be separated into several phases: philosophy and approach to research, method of data collection, analysis framework, and validation by comparative analysis.

3.1 Research Philosophy and Approach

The analysis is based on the interpretivist school of thought, which pays special attention to the perception of architectural and cultural realms in the humanistic and socio-historical sense. Along with the cultural symbols of the regional way of life, social stratification and environmental reaction, Marathi vernacular housing represents not only the architectural artifacts [4]. So, an interpretivist approach will enable a researcher to make some meanings of these structures based on the experience of people using them and the local knowledge of craftsmen participating.

The method is qualitative and descriptive that is supplemented by case study analysis. That allows a profound study of chosen homes and their interventions of adaptive regulations. It is about the realization of spatial structure, material conservation, and design interventions offsetting contemporary requirements with the heritage conservation [5].

3.2 Research Design

ISSN PRINT 2319 1775 Online 2320 7876
 Journal UGC CARE Listed (Group-I) Volume 14, Issue 05 Nov 2025

This research design is multiphase in nature combining literature review, field observation, and stakeholder interviews, as well as comparative assessment. It will start with an extensive literature review to get a grasp of vernacular architectural principles, adaptive reuse theories to conservation policies. This is then accompanied by fieldwork within Maharashtra selected areas especially Pune, Satara, Kolhapur, Nashik which are among the areas that have had significant traditions of Maratha architecture. [6]

The key data formats will be visual documentation and architectural survey, measurements and semi-structured interviews with local residents, architects and heritage specialists. Secondary data will be historical documents, architectural drawings, conservation plans, and research studies carried out before.

3.3 Data Collection Methods

The data collection procedure is split into two broad categories which are primary data (gathered in the field) and secondary data (gathered in literature).

Table 1: Data Collection Framework

Type of Data	Source/Method	Purpose	Expected Outcome
Primary Data	Field visits, visual documentation, photography, measurements	To record existing conditions of Maratha dwellings and their architectural features	Detailed architectural documentation and condition analysis
Primary Data	Semi-structured interviews with homeowners, architects, and conservation experts	To gather qualitative insights into the social value, functional adaptation, and conservation challenges	Identification of adaptive reuse practices and user perspectives
Secondary Data	Literature review, archival drawings, old photographs, government and NGO reports	To understand historical context, building typologies, and prior conservation frameworks	Establish theoretical grounding and comparison with current practices

Such mixed data collection will guarantee in-depth insights into both physical (architectural) and non-physical (cultural) locations of the homes.

3.4 Case Study Selection

The contextual and practical insights provided in the research are based on the case study. The cases are picked according to the representative nature of the cases in Maratha vernacular typologies and their potential or actual adaptive reuse [7]. The selection criteria are:

- Architectural and historical value.
- Present physical state (intact, altered, or refurbished).
- Positioning in the Maratha cultural territory.
- Documentation and observation accessibility.

ISSN PRINT 2319 1775 Online 2320 7876
 Journal UGC CARE Listed (Group-I) Volume 14, Issue 05 Nov 2025

Examples of representative cases could be Wada houses in Pune or Kolhapur which have been adapted into cultural institutions or boutique accommodation. A common set of criteria that pays attention to the architectural character, adaptive intervention, and a response of the user is used to analyze each case.

3.5 Analytical Framework

The collected data is compared in terms of architectural integrity, sustainability, functionality, and user satisfaction and those are analyzed in terms of comparative evaluation framework. Three fundamental parameters are inscribed in the analysis as follows:

1. **Architectural Conservation:** An evaluation of retention of original materials, space allocation, and style, carved wooden brackets, courtyards and facades.
2. **Namespace Adaptation:** The evaluation of the integration of contemporary functions i.e. residential, cultural, or hospitality purposes without undermining traditional aesthetics [8].
3. **Sustainability:** The focus on energy-efficiency, the use of local materials and climatic responsiveness of reused buildings.

Table 2: Analytical Evaluation Matrix

Evaluation Parameter	Assessment Indicators	Data Source	Expected Findings
Architectural Integrity	Retention of original materials, façade preservation, spatial organization	Field survey, drawings	Identification of structures maintaining high heritage value
Functional Efficiency	Adaptability of space, user comfort, integration of modern utilities	Interviews, observation	Determination of successful adaptive interventions
Sustainability Measures	Use of local materials, passive cooling, energy optimization	Field data, documentation	Insights into eco-responsive reuse strategies

This analytical matrix assists in making comparisons and interpretation of results in a number of case studies systematically.

3.6 Data Analysis Techniques

Data is gathered on the field and literature carried out and examined qualitatively.

- **Descriptive Analysis:** This is applied to document the physical and culture of every dwelling.
- **Comparative Analysis:** Evaluates similarities and differences in adaptive reuse practices in selected cases.
- **Thematic Coding:** Thematic Coding is used on transcripts of interviews to find common themes, including but not limited to heritage value, modern comfort and community participation [9].
- **Mapping and Visualization:** Architectural drawings, photographs, and schematic pictures are employed to show pre and post adaptive interventions.

All these approaches guarantee that the analysis is supported with the architectural evidence and human experience at the same time.

3.7 Ethical Considerations

The study has ethical practices that are upheld. The participants receive the aim of the research, and their approval is met with the interviews or photo recording. Information dealing with risky or delicate cultural or personal matters is handled in secret [10]. The study focuses on conserving heritage ethics as well since it abides by the local culture and that any recommendations should be in favor of involvement by the community and the preservation of authenticity.

IV. RESULTS AND ANALYSIS

The chapter shows and discusses the conclusions drawn as a result of field survey, interviews, and the analysis of secondary data. This is aimed at studying the way adaptive reuse policies have been implemented in the Maratha vernacular houses to maintain cultural specificity but still make them relevant to current functionality. The results have been grouped under five categories namely: (1) architectural documentation, (2) material conservation and restoration, (3) spatial adaptability and functional transformation, (4) sustainability and energy efficiency, and (5) community perception and socio-cultural impact.

It is analyzed using five representative case studies in Maharashtra, namely, dwelling in Pune, Satara, Kolhapur, Nashik and Wai, which were selected due to their unique Marathi architectural nature and various degrees of adaptive intervention.

Figure 1: “Toward the Adaptive Reuse of Vernacular Architecture”

4.1 Overview of Selected Case Studies

The characteristic elements of the Maratha style of buildings, the inward-facing courtyard (angan), wooden columns, elaborate brackets (moriyas), sloping tiled roofs, massive laterite or brick walls are the hall marks of the dwellings chosen: a guarantee of climatic comfort [11].

Table 1: Overview of Case Studies

Case No.	Location	Type of Dwelling	Original Function	Current Adaptive Use	Year of Reuse Intervention

ISSN PRINT 2319 1775 Online 2320 7876
 Journal UGC CARE Listed (Group-I) Volume 14, Issue 05 Nov 2025

1	Pune	Shaniwar Peth Wada	Residential	Heritage Museum and Café	2018
2	Satara	Deshpande Wada	Residential	Homestay and Craft Studio	2020
3	Kolhapur	Inamdar Wada	Courtyard House	Cultural Learning Centre	2019
4	Nashik	Joshi Wada	Merchant's Residence	Boutique Guest House	2021
5	Wai	Patwardhan Wada	Aristocratic Mansion	Community Library and Workshop Space	2017

All these examples have gone through different adaptive reuse processes that are characterized by different levels of interventions: minimum restoration to massive reconstruction of its functions.

4.2 Architectural Documentation and Condition Analysis

The architectural documentation demonstrated that all the dwellings that have been analyzed possess the main aspects of vernacular -central courtyard, ventilated corridors, walls of masonry of thick walls and wooden ceilings. Nevertheless, their physical states were different prior to reuse [12].

Table 2: Physical Condition Assessment Before Reuse

Building Component	Condition (Average Score out of 10)	Major Observations	Required Intervention
Structural Frame	7.5	Timber beams intact; minor termite damage	Chemical treatment, partial replacement
Walls	8.0	Good stability; surface erosion in laterite	Lime plaster restoration
Roof	6.2	Broken Mangalore tiles; leakage issues	Full re-tiling and waterproofing
Flooring	7.0	Local stone flooring; uneven surface	Polishing and leveling

ISSN PRINT 2319 1775 Online 2320 7876
 Journal UGC CARE Listed (Group-I) Volume 14, Issue 05 Nov 2025

Facade	8.5	Well-preserved carvings; faded paint	Cleaning, minor repair
Courtyard	9.0	Excellent ventilation; structural soundness	Minimal conservation needed

Based on this analysis, it can be seen that the vernacular building methods were incredibly long-lived. Laterite, teakwood and mortar made of lime were used traditionally and hence lasting. Most of the restoration works were aimed at repairing termites, water leakages and weathering of the facade.

These Wadas were good subjects of adaptive reuse due to the overall structural integrity of these structures. The climatic responsiveness that the original design possessed (e.g. cross-ventilation via the courtyard and the shaded verandas) was useful even in contemporary settings.

Figure 2: “Modern-Vernacular Fusion: A Case of Wada Architecture in Pune”

4.3 Material Conservation and Restoration Techniques

The issue of conservation was more about that of materials in order to preserve authenticity. The majority of interventions did not focus on conservation techniques and the re-use of the original materials in any possible cases. The plasters were re-applied using lime to do away with cement that is usually incompatible with the old walls. Local artisans were also significant players: traditional joinery and carving [13].

Table 3: Material Conservation Techniques in Case Studies

Material/Element	Traditional Restoration Technique Used	Reason for Use	Observed Effectiveness

ISSN PRINT 2319 1775 Online 2320 7876
 Journal UGC CARE Listed (Group-I) Volume 14, Issue 05 Nov 2025

Timber Columns and Beams	Neem oil treatment and replacement with seasoned teak	Termite prevention and structural strengthening	Highly effective; extended lifespan
Lime Plaster	Reapplication using local sand and jaggery mix	To ensure breathability and compatibility with walls	Excellent thermal and visual performanc e
Mangalore Tiles	Reused with waterproof underlayment	Prevent leakage and preserve roof aesthetics	Improved insulation and durability
Wooden Screens (*Jalis*)	Polished and repaired manually	Retain ventilation and visual privacy	Retained traditional charm
Stone Flooring	Locally polished, leveled, and sealed	To maintain original flooring while improving usability	Enhanced visual continuity

The findings showed that local reft use did not only maintain authenticity, but also minimized the carbon footprint. The use of materials that were environmentally friendly and accommodative of the culture was also a sustaining factor to the culture and the environment.

4.4 Spatial Adaptability and Functional Transformation

The analysis found that there were differences in adapting to changes in all five cases. Previously private space (family yard or angan) turned into a new space as a place of interaction, gallery or dining [14]. The tight was to ensure the spatial hierarchy and fit in current utilities like plumbing, lighting, and a provision of access.

Table 4: Functional Transformation Matrix

Original Space	**Adaptive Function (Post-Reuse)**	**Degree of Intervention**	**Heritage Integrity (1–10)**	**User Functionality (1–10)**
Central Courtyard	Café Seating / Cultural Events	Moderate	8.5	9.0
Front Veranda	Reception / Display Area	Minimal	9.0	8.5
Inner Rooms	Guest Bedrooms / Studios	Moderate	7.5	9.0
Storage Areas	Washrooms / Kitchen	High	6.5	8.0
Terrace	Open Dining / Viewing Deck	Low	8.0	8.8

ISSN PRINT 2319 1775 Online 2320 7876
 Journal UGC CARE Listed (Group-I) Volume 14, Issue 05 Nov 2025

The findings demonstrate that building upon the original character, adaptive interventions tended to be sensitive. Less important spaces (in heritage value) were converted to functional use (e.g. storage or service) whilst important architecture was preserved with minimal modifications such as the courtyard, wooden facades and verandah.

A comparative analysis has shown that adaptive reuse has made the usability much better without significant esthetic sacrifice. There was an average heritage integrity score of 7.9 and a user functionality score of 8.6- thus showing a balance of tradition against modern demands to be successful [27].

Figure 3: "Vernacular Architecture for a Changing Climate"

4.5 Sustainability and Environmental Efficiency

Marathi vernacular houses have sustainable features inbuilt because of being climate responsive. Some of the green strategies were incorporated that included the use of solar panels, the collection of rain water, and optimization of the use of natural air to cool the place, which is known as post-adaptive reuse.

Table 5: Sustainability Indicators Before and After Reuse

Sustainability Parameter	Before Reuse (Score/10)	After Reuse (Score/10)	Improvement (%)	Remarks
Natural Ventilation	8.5	9.0	+6%	Improved through courtyard openness
Energy Efficiency	6.0	8.5	+42%	Solar integration and LED lighting
Water Management	5.5	8.0	+45%	Rainwater harvesting systems installed

ISSN PRINT 2319 1775 Online 2320 7876
 Journal UGC CARE Listed (Group-I) Volume 14, Issue 05 Nov 2025

Thermal Comfort	7.5	8.8	+17%	Roof insulation and lime plaster aided cooling
Material Sustainability	8.0	9.2	+15%	Local reuse reduced environmental footprint

The overall environmental performance of the post-reuse increased by an average of 25, which shows that vernacular architecture is already sustainable and that it can be more optimized with the help of the modern technology. These projects show that heritage protection is perfectly compatible with the notion of green architecture [28].

4.6 Community Perception and Socio-Cultural Impact

Resident, visitor, and local artisan interviews showed that there was a positive change in community perception following adaptive reuse. Local pride, tourism and employment were created by the transformation of the old or run-down Wadas into colorful community properties.

Its residents were glad that contemporary functions were added to their neighborhoods, including cafes, libraries and cultural centers, added new energy to the already familiar spatial language [29]. Nonetheless, few issues regarding commercialization, and cultural weakening also were reported.

Key insights include:

- Eighty two percent of respondents thought that adaptive reuse reinstated local heritage awareness.
- 74% enjoyed the boosting of economy because of tourism and jobs.
- 68 percent appreciated the aesthetic flow of the old and new functions.
- It was only 12% who believed that they overmodernized the spaces in the reuse projects.

These answers suggest that adaptive reuse is a highly acceptable community-based heritage approach, provided that it is done sensitively.

4.7 Comparative Analysis of Case Studies

Each case study was comparatively synthesized to measure the heritage integrity, functionality, sustainability, and community acceptance.

Table 6: Comparative Evaluation of Five Case Studies

Case Study	Heritage Integrity (1–10)	Functional Adaptability (1–10)	Sustainability (1–10)	Community Acceptance (1–10)	Overall Performance (%)
Shaniwar Peth Wada (Pune)	8.5	9.0	8.2	9.1	87.2

ISSN PRINT 2319 1775 Online 2320 7876
 Journal UGC CARE Listed (Group-I) Volume 14, Issue 05 Nov 2025

Deshpande Wada (Satara)	7.8	8.7	8.4	8.9	83.4
Inamdar Wada (Kolhapur)	8.2	8.5	9.0	9.0	86.2
Joshi Wada (Nashik)	7.9	8.9	8.8	8.7	85.8
Patwardhan Wada (Wai)	8.0	8.4	9.1	9.2	86.1

The best according the performance was seen at the project of Shaniwar Peth Wada (Pune) which skilfully combined a cafe and a heritage museum without interference with the original nature. The Patwardhan Wada (Wai) had been integrated as an example of amazing community integrative community facilities by means of public utility by being turned into a library and workshop area. In general, the five cases were rated higher than 83 percent which denotes high congruence of conservation objectives and contemporary functions [30].

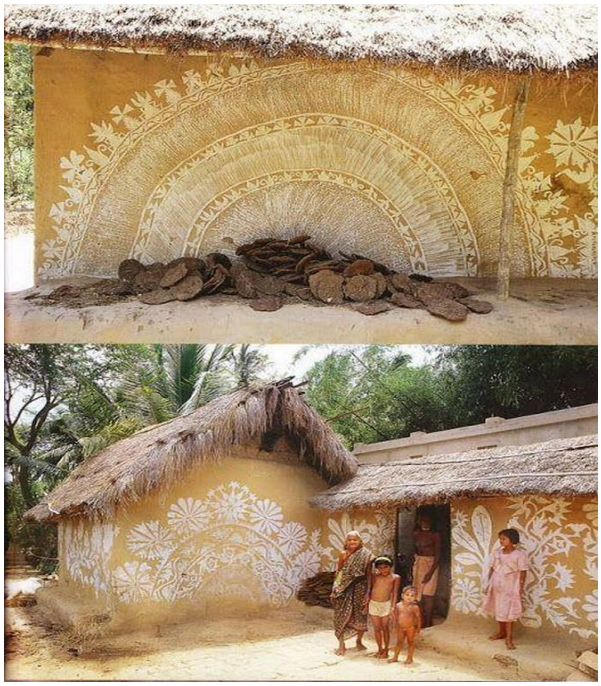

Figure 4: “Vernacular Architecture as an Exemplar of circular practices”

4.8 Discussion of Key Findings

The findings reveal that adaptive reuse of Marathi residential houses is not only possible but useful in terms of their cultural, environmental, and social aspects. There are certain trends that are produced as a result of the analysis:

1. **Architectural Resilience:** Structural and Spatial Systems: Structural and spatial systems of Wadas are strong and adaptable to meet modern needs without significant modifications.

ISSN PRINT 2319 1775 Online 2320 7876
 Journal UGC CARE Listed (Group-I) Volume 14, Issue 05 Nov 2025

2. **Material Compatibility:** Lime plaster, wood treatments and materials that are available locally provided authenticity and thermal efficiency. Substitute of cement related interventions with the conventional approaches produced better outcomes.
3. **Sustainability Integration:** The characteristics of a vernacular (courtyards and slanted roofs) remain to provide the excellent passive performance, with the new modern add-ins (solar panels) even increasing the indicators of sustainability.
4. **Social Engagement:** The community had to be involved in adaptive reuse to be successful. The most successful projects were projects in which there was an involvement of their local stakeholders and a greater success in maintenance.
5. **Functional Balance:** Renovated spaces used as cultural, education, or hospitality developed an extended legacy with their history and attained modernity.
6. **Sensitivity to Design:** Intervention strategies with the least intervention were effective. The overly modernized aspects especially interior detailing is usually seen as incompatible or extreme.

V. CONCLUSION

The adaptive reuse and conservation of the Marathi vernacular residential villas entailed in this study, under the title of Adaptive Reuse and Conservation of Maratha Vernacular Dwellings: Balancing Tradition and Modern Functionality determines that the adaptive reuse is not solely a form of design intervention, but a sustainable cultural policy. The results reveal that Marathi everyday architecture which has the use of courtyards, timber constructions and climate oriented structures has incredible adaptability to the modern functions under guidance of sensitive and context oriented approaches to design. In the analysis of the case studies and on-site documentation, the authentic materials, structural integrity and hierarchy of the space can always be preserved so that modern interventions do not eclipse the traditional character but complement it. The fact that the conversion of Wadas into cultural centers, guest houses, and community areas turned out to be successful certifies that conservation of heritage does not have to conflict with the functionality of modernity. Moreover the environment performance is also strengthened by the incorporation of new sustainable methods (e.g. lime based materials use, solar power, and the use of rainwater, etc.) keeping the historical fabric intact. People engagement came out as a crucial issue, which would facilitate social ownership and economic sustainability provided by tourism and local craft revival. In general, the research determines that adaptive reuse is a viable method to re-use the deteriorating heritage buildings, avoid cultural loss, and the notion of circular economy of preservation. When the Maratha houses are maintained in the form of adaptive reuse, they do not only maintain architectural history, but also contains the continuity of the cultural identity living in Maharashtra. This is why the study suggests a harmonizing model when heritage protection and management are merged with sustainability and innovation of functions, which does not compromise the architectural wisdom and knowledge developing a modern meaning so that the needs of the present and the dreams of the future could be fulfilling.

REFERENCE

ISSN PRINT 2319 1775 Online 2320 7876
 Journal UGC CARE Listed (Group-I) Volume 14, Issue 05 Nov 2025

[1] Asriana, N., Khidmat, R.P., Jaya, M.A., Ujung, V.A., Satria, W.D. & Andriani, R. 2024, "Syntactic analysis of traditional houses in urban kampung", *Built Heritage,* vol. 8, no. 1, pp. 25.

[2] Baghel, A. & Mehta, P. 2025, "A synergistic exegesis of RETV compliance and its correlation with residential energy efficiency in the arid climatic paradigm of Jodhpur", *SN Applied Sciences,* vol. 7, no. 8, pp. 847.

[3] Barelles-Vicente Emma, Torner-Feltrer, M., Llinares Millán Jaime & Aparicio-Fernández, C. 2025, "From Ruin to Resource: The Role of Heritage and Structural Rehabilitation in the Economic and Territorial Regeneration of Rural Areas", *Land,* vol. 14, no. 9, pp. 1765.

[4] Bigiotti, S., Santarsiero, M.L., Del Monaco, A.I. & Marucci, A. 2025, "A Typological Analysis Method for Rural Dwellings: Architectural Features, Historical Transformations, and Landscape Integration: The Case of "Capo Due Rami", Italy", *Land,* vol. 14, no. 2, pp. 374.

[5] Bo, L. & Muhammad Faizal, A.R. 2025, "The Value of Current Sense of Place in Architectural Heritage Studies: A Systematic Review", *Buildings,* vol. 15, no. 6, pp. 903.

[6] Boca, M.C., Bungau, C.C. & Hanga-Farcas, I.F. 2025, "Climate-Conscious Sustainable Practices in the Romanian Building Sector", *Buildings,* vol. 15, no. 12, pp. 2106.

[7] Dall'Orto Valentina & Monteros, C.K. 2025, "Living Architecture: The Role of Intermediate Spaces in the Social Sustainability of Andean Rural Housing", *Sustainability,* vol. 17, no. 18, pp. 8267.

[8] Deshao, W., Jieqing, X. & Luwang, C. 2025, "Spatial Narrative Optimization in Digitally Gamified Architectural Scenarios", *Buildings,* vol. 15, no. 15, pp. 2597.

[9] Dominik, P., Woźniak Apolonia & Widera, B. 2025, "Recent Research on Circular Architecture: A Literature Review of 2021–2024 on Circular Strategies in the Built Environment", *Sustainability,* vol. 17, no. 17, pp. 7580.

[10] Fajarwati, A.A.S., Rombe, O.S., Henry, L., Rachmayanti, I. & Meliana, S. 2021, "Hybridity Culture: The Adaptive Reuse Concept for an Escape Place. Study Case: Gedung Antara, Pasar Baru, Jakarta", *IOP Conference Series.Earth and Environmental Science,* vol. 933, no. 1.

[11] Fatmaelzahraa, H. & Khawla, A. 2025, "Adaptive Re-Use of Cultural Heritage Sites: A Strategy for Circular Economy", *Sustainability,* vol. 17, no. 14, pp. 6403.

[12] Fuentes Pardo, J.M. 2023, "Challenges and Current Research Trends for Vernacular Architecture in a Global World: A Literature Review", *Buildings,* vol. 13, no. 1, pp. 162.

[13] Ge, W. & Mohd Shahrudin bin, A.M. 2025, "A Review of and Prospect of Village Architecture Research from the Perspective of Rural Tourism", *World,* vol. 6, no. 1, pp. 21.

[14] Hu, J., Hanyi, W., Fan, H. & Chen, Z. 2025, "Recognition and Evaluation of Architectural Heritage Value in Fujian Overseas Chinese New Villages", *Buildings,* vol. 15, no. 13, pp. 2336.

[15] Ihab, K. & Doğa, Ü. 2025, "Advancing Sustainability and Heritage Preservation Through a Novel Framework for the Adaptive Reuse of Mediterranean Earthen Houses", *Sustainability,* vol. 17, no. 14, pp. 6447.

[16] Indraja, R. & Grazuleviciute-Vileniske Indre 2025, "Tacit Sustainability in the Countryside: Cultural and Ecological Layers of Lithuanian Heritage Homestead", *Land,* vol. 14, no. 9, pp. 1910.

[17] Khei, S., Mateus, R., Ortega, J. & Briones-Llorente, R. 2024, "Quantitative Analysis of Vernacular Residential Building Typologies and Bioclimatic Strategies in the Warm-Summer Mediterranean Climate: The Montesinho Natural Park as a Case Study", *Buildings,* vol. 14, no. 8, pp. 2321.

[18] Kong, D., Li, Z., Fei, X. & Chen, Z. 2025, "Color Preference and Color Supportive Behavior: The After Effects of Color Perception of Rural Housing Among the Indigenous Residents in Gutian District, Fujian Province, China", *Buildings,* vol. 15, no. 5, pp. 743.

ISSN PRINT 2319 1775 Online 2320 7876
 Journal UGC CARE Listed (Group-I) Volume 14, Issue 05 Nov 2025

[19] Liu, H., Rouziahong, P., Nurimaimaiti, T., Saierjiang, H., Wang, C. & Huandi, Y. 2025, "Integrating Social Network and Space Syntax: A Multi-Scale Diagnostic–Optimization Framework for Public Space Optimization in Nomadic Heritage Villages of Xinjiang", *Buildings,* vol. 15, no. 15, pp. 2670.

[20] Liwen, J., Cai, J. & Yilun, F. 2025, "Spatiotemporal Distribution and Heritage Corridor Construction of Vernacular Architectural Heritage in the Cao'e River, Jiaojiang River, and Oujiang River Basin", *Land,* vol. 14, no. 7, pp. 1484.

[21] Ma, Y. & Roosli, R. 2025, "Research on the Adaptive Development of Traditional Architectural Decorative Crafts: A Case Study of Chaozhou Inlaid Porcelain", *Sustainability,* vol. 17, no. 4, pp. 1541.

[22] Maria, R.T. & Sanzaro, D. 2024, "A Knowledge and Evaluation Model to Support the Conservation of Abandoned Historical Centres in Inner Areas", *Heritage,* vol. 7, no. 3, pp. 1618.

[23] Maryam, M.S., Còssima, C., Reza, A. & Chiara, G. 2025, "The Social Life of Residential Architecture: A Systematic Review on Identifying the Hidden Patterns Within the Spatial Configuration of Historic Houses", *Buildings,* vol. 15, no. 12, pp. 2120.

[24] Mazzetto, S. & Vanini, F. 2023, "Urban Heritage in Saudi Arabia: Comparison and Assessment of Sustainable Reuses", *Sustainability,* vol. 15, no. 12, pp. 9819.

[25] Miran, F.D. & Husein, H.A. 2023, "Introducing a Conceptual Model for Assessing the Present State of Preservation in Heritage Buildings: Utilizing Building Adaptation as an Approach", *Buildings,* vol. 13, no. 4, pp. 859.

[26] Mouraz, C.P., Ferreira, T.M. & Silva, J.M. 2024, "Building rehabilitation, sustainable development, and rural settlements: a contribution to the state of the art", *Environment, Development and Sustainability,* vol. 26, no. 10, pp. 24937-24956.

[27] Muldoon-Smith, K., Moreton, L. & Loxley, J. 2025, "Lo-Fi Adaptive Re-Use in the Ouseburn Valley: What the Physical Materiality of Everyday Historical Industrial Buildings Can Tell Us About Sustaining Cultural and Creative Clusters", *Buildings,* vol. 15, no. 3, pp. 427.

[28] Naima, B. 2021, "Community-led initiatives for the rehabilitation and management of vernacular settlements in Oman: a phenomenon in the making", *Built Heritage,* vol. 5, no. 1, pp. 21.

[29] Ordóñez-Castañón, D. & Teresa, C.F. 2024, "Toward the Adaptive Reuse of Vernacular Architecture: Practices from the School of Porto", *Heritage,* vol. 7, no. 3, pp. 1826.

[30] Ozge, O. 2025, "Typo-Morphology as a Conceptual Tool for Rural Settlements: Decoding Harran's Vernacular Heritage with Reflections from Alberobello", *Land,* vol. 14, no. 7, pp. 1463.